**Department of Computer Science**

**New Jersey City University**

**Spring 2025**

**Course**: CS204 Computer Organization (3 Credits)

**Classroom**: K 127

**Time**: Thursday 7:00 – 9:45 pm

**Instructor**: Dr. Galathara Kahanda Email: [gkahanda@njcu.edu](mailto:gkahanda@njcu.edu)

**Office Hour**: 10:00-11:00 on Thursday

**Textbook**: Logic and Computer Design Fundamentals, M. Morris Mano and Charles R. Kime, 5 th Edition, Prentice Hall Publishers, ISBN:978-0-13-198926-9

**Description**: An introduction to computer system structure and organization covers the topics: representation of information, binary logic, Boolean algebra, simplification with Karnaugh maps, combinational logic circuits analysis and design, sequential circuit analysis and design, registers and register-transfer language, memory basics, and input/output.

**Learning Outcomes:**

* Overview of the computer functions
* Understanding of Boolean logic and simplification strategies
* Basics of logic circuit design and analysis

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| **Week** | **Topic** | **Assignments** |
| 1 | Chapter 1: Digital Systems and Information, Information representation |  |
| 2 | Chapter 1: Number systems, Arithmetic  operations, Decimal codes | Homework #1  Quiz #1 |
| 3 | Chapter 2: Logic and Simplification | Quiz #2 |
| 4 | Chapter 2: Standard forms (minterms and maxterms) | Homework #2 |
| 5 | Chapter 2: Karnaugh Maps | Quiz #3 |
| 6 | **Midterm Review and midterm** | **Feb 27, 2025** |
| 7 | Chapter 3: Combinational logic circuits | Homework #3 |
|  | **Spring Recess MAR. 10 - 16, 2025** |  |
| 8 | Chapter 3: Typical circuits, analysis | Quiz #4 |
| 9 | Chapter 3: Combinational circuit design |  |
| 10, 11 | Chapter 4: Chapter 5: Sequential circuits  Latches, Flip flops, sequential circuit analysis | Homework #4 |
| 12, 13 | Chapter 5: Sequential circuit design Quiz #5 | Quiz #5 |
| 14 | Chapter 6 : Memory | Homework #5 |
| 15 | **Final Review and Final Exam** | May 15, 2025 |

**Grading Policy**:

Attendance and class participation 5%

(If you use mobile phones or any disruption during the lecture or missing 3 or more classes without any valid excuse, you will get 0 )

Quizzes (individual work) 25%

Homework (individual work 10%

Midterm Exam (closed book) 30%

Final Exam (closed book) 30%

**Final Letter Grade**:

based on the simple weighted mean of midterm exam, final exam and quiz or lab

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| **Numerical Grade** | **Letter Grade** |
| [90 -100] | A |
| [88-89] | A- |
| [85 – 87] | B+ |
| [80 – 84] | B |
| [78 - 79] | B- |
| [75 – 77] | C+ |
| [70 – 74] | C |
| [68 – 69] | C- |
| [65 – 67] | D+ |
| [60 – 64] | D |
| [58 – 59] | D- |
| [0 – 57] | F |

**Other Policies** : follow the university policies.

**Note: This syllabus is subject to be updated anytime if necessary.**